

**Patent claims :**

- 1 . The calculating method to determine the dynamic unbalance in rotor of rotating machine by the geometric or complex number vector calculation, which is using with the ratios between the distance lengths of two bearings of machine and the ratios of the distance length of two correction planes chosen arbitrarily, based on the data consist of magnitudes and directions for vibration vector quantities of displacement, velocity, or acceleration which data originated in dynamic unbalance in rotor of machine, which data are measured at the two bearings of the rotating machine without the test runs attached with trial masses, and which data are defined as the dynamic unbalance on two journal planes of the rotor of rotating machine.
- 2 . The computers, measuring instruments and testing facilities, which are directly or indirectly applied or equipped the calculating method to determine the dynamic unbalance in rotor with the vector calculation mentioned in the claim1.